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WARWICK CHEMISTRY

Facilitator Notes

Sway – Unravelling Unconscious Bias

Chapter 5 to Chapter 8

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Is Publishing in the Chemical Sciences Gender Biased?

A report by Royal Society of Chemistry

DiVERSiTY BOOK CLUB

DISCUSSION BOOKLET 2

"Me? Biased? Unconscious bias is like jealousy: nobody likes to admit it, and often we're unaware of it."
Thais Compoint

Thinking back *- What challenged/surprised you from the chapters?*

This could be something pertinent or something that really grabbed your attention and made you think twice.

This is an open question that we will likely use in some form in all the sessions. It is a good opportunity to gauge the feelings and understanding of the group.

Last session we considered what unconscious bias is and how it differs from conscious bias. We considered how unconscious biases form, why we use them and their historical basis, and explored stereotype activation versus application, and whether scientists are biased.
In this session we will consider how we listen to and shape the messages we choose to hear, the concept of "othering" and the dangers of micro-aggressions. By exploring these topics, we will learn about the covert and subtle forms of prejudice that arise from a perception of cultural difference and how this can lead to the hardening of lines between in-groups and out-groups.

Discussion

What are "echo chambers" and "filter bubbles"? How can they influence/re-enforce people's beliefs and opinions? *Re-read pages 159-63*

The two terms can sometimes be considered synonymous and describe a scenario in which someone's confirmation bias is strengthened by filtering or removing opinions they do not agree with.
Echo chambers often refer to human information behaviour, while filter bubbles refer to algorithmic information filtering.

What does the Yale study on CVs and gender tell us about gender bias and self-bias? What can we learn from this? *Re-read pages 205*

Everyone is biased and not 100% objective. We need to be aware of these biases in the workplace especially in the hiring process. It is also notable that people can be biased against people who are like them i.e., self-bias, as people can acquire the biases of those around them.

What is "othering"? How does it link to micro-aggressions? *Re-read pages 274-281*

Someone who is the "other" is perceived as not part of the community/norm. Therefore, "othering" is to embed and perpetuate the perception that someone is not part of the community or is not the norm.
Micro-aggressions are comments or slights that are not overt, they are subtle actions or language that "others" someone out of the in-group. They are a form of negative stereotyping.

Reflecting

What is the issue with micro-aggressions? *Re-read pages 281-285*

Micro-aggressions still exclude and "other" individuals no matter how small or subtle. They contribute to a hostile and unwelcoming environment for people who are members of stigmatised or culturally marginalised groups.
It is worth remembering that for individuals that are the target of micro-aggressions, they will often face multiple micro-aggressions in a day.

"Individually these incidents [micro-aggressions] seem benign. But cumulatively I believe that they act like sort of low-grade microtraumas that can end up hurting you and your biology."
Dr Roberto Montenegro, page 282

Application

How are awards (such as the Nobel Prizes) and publishing biased? *Re-read pages 188-192*

An interesting piece on women and Nobel Prizes can be found here[1]

"Recognition is awarded partly on the basis of past recognition"[2]
Prof. Simine Vazire

As seen with the Yale study, the facade of perceived "scientific" objectivity allows for a lack of accountability and recognition of the long-standing biases/gender stereotypes within the scientific institution. Examples of this include male names being shown before female names in scientific writing (Chapter 7 Sugar and Spice) implying more credibility/contribution for the paper. Awards like the Nobel prize do not factor in the structural barriers women in STEM face including fewer support networks (less likely to be made aware of awards or be nominated). Women's accomplishments are also often downplayed as either being a token or outright ignored, for example not referring to women by their titles (Dr).

How do you decrease bias in publishing and awards?

An interesting piece on gender bias in academia can be found here[3]

"The first step I think is awareness that there is bias here," (p.26 of RSC report) so that women (and other under-represented groups) are not overburdened with the responsibility of driving greater equality instead of their own personal goals.

We encourage individuals to think of and discuss some of their own ideas for this. Some suggestions we have include;

- *Make editorial process more transparent*
- *Diversify editorial/ referee pools*
- *Give grant/award panels bias training*
- *increase the diversity in committees*
- *compensate women and other minority groups for this commitment by reducing teaching load or other administrative duties*

Additional Notes;

References;

(1) Feeney, M. K. Why more women don't win science Nobels https://theconversation.com/why-more-women-dont-win-science-nobels-104370.

(2) Vazire, S. Our Obsession with Eminence Warps Research. *Nature* **2017**, *547* (7661), 7–7.

(3) Llorens, A.; Tzovara, A.; Bellier, L.; Bhaya-Grossman, I.; Bidet-Caulet, A.; Chang, W. K.; Cross, Z. R.; Dominguez-Faus, R.; Flinker, A.; Fonken, Y.; Gorenstein, M. A.; Holdgraf, C.; Hoy, C. W.; Ivanova, M. V.; Jimenez, R. T.; Jun, S.; Kam, J. W. Y.; Kidd, C.; Marcelle, E.; Marciano, D.; Martin, S.; Myers, N. E.; Ojala, K.; Perry, A.; Pinheiro-Chagas, P.; Riès, S. K.; Saez, I.; Skelin, I.; Slama, K.; Staveland, B.; Bassett, D. S.; Buffalo, E. A.; Fairhall, A. L.; Kopell, N. J.; Kray, L. J.; Lin, J. J.; Nobre, A. C.; Riley, D.; Solbakk, A.-K.; Wallis, J. D.; Wang, X.-J.; Yuval-Greenberg, S.; Kastner, S.; Knight, R. T.; Dronkers, N. F. Gender Bias in Academia: A Lifetime Problem That Needs Solutions. *Neuron* **2021**, *109* (13), 2047–2074.